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EST.
Unpublished (1996)
On Sep 12, 1996 this sequence version rep
Contact: Marra M/Mouse EST Project
WashU-HHMI Mouse EST project
Washington University School of MedicineP
                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.

1 (bases 1 to 602)

Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuc Geisel,S., Kucaba,T., Lacy,M., Le,M., Martin,J., Morris,M., Schellenberg,K., Steptoe,M., Tan,F., Underwood,K., Moore,B., Theising,B., Wylie,T., Lennon,G., Soares,B., Wilson,R. and Waterston,R.

The WashU-HHMI Mouse EST Project
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Seq primer: -28ml3 rev2 ET from
High quality sequence stop: 459.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Email: mouseest@watson.wustl.edu
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4444 Forest Park Parkway, Tel: 314 286 1800 Fax: 314 286 1810 Email: mouseest@watson.wu
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/strain="C57BL/6J"
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                                                                                          a.
                                                                                                                                                                              CCCCGGACGCTATGGCCCACCCCTCCAGCTGGCCCCTCGAGTAGGATGGTAGCACGCAAC 175
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            GTCCCAGCCCCAGCCCCTGGCGACACTCACTTCCGCACCTTCCGCTCCCACTCCGATTAC
                                                                   TCCTCGTCCTCGTCTTCGTCCTCGCCAGCGGCCCCCGTGCGTCCCCGGCCCTGCCCGGCC 295
                                                                                                                                                   CCCCGGACGCTATGGCCCACCCCTCCAGCTGGCCCCTCGAGTAGGATGGTAGCACGTAAC
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The Institute for Genomic Research 9712, Medical Center Drive, Rockvil Tel: (301)-838-3529
Fax: (301)-838-0208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       623 bp EST191777 Normalized RLUAJ34 3' end
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; 1 (bases 1 to 623)
Lee,N.H., Glodek,A., Chandra,I., Mason,T.M., Quacker Kerlavage,A.R. and Adams,M.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              602
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      il: nhlee@tigr.org
primer: M13-21.
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                                                                                                                                                                                                                                                                                                                                                94
                                                                                                                                                                                                                                                                                                                                               /clone_lib="Normalized rat lung, Bento
/note="Organ: lung; Vector: pT7T3Pac; S
Site_2: Not1"
a 193 c 254 g 82 t
                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Rattus sp."
/db_xref="ATCC (inhost):2008043"
/db_xref="taxon:10118"
/clone="RLUAH34"
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2.9e-85;
les 53;
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ACCESSION
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KEYWORDS
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AUTHORS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unpublished (1996)
On Jan 17, 1998 this sequence version repl
Contact: Marra M/Mouse EST Project
WashU-HHMI Mouse EST Project
Washington University School of MedicineP
4444 Forest Park Parkway, Box 8501, St. LC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ua94b12.rl Soares mouse mammary gland IMAGE:1365119 5' similar to TR:035716 SIGNALLING-1. [1] ;, mRNA sequence.
                                                                                                                                                                                                                                                  rossible reversed clone: similarity on wrong Seq primer: -28m13 rev2 ET from Amersham High quality sequence stop: 512.
                                                                                                                                                                                                                                                                                                                           Email: mouseest@watson.wustl.edu
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                               Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The WashU-HHMI Mouse EST Project
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               nouse mouse
/note-"Organ: mammary gland; Vector: pT773D-Pac (Pharmacia) with a modified polylinker; Site_1: Not I; Site_2: Eco RI; lst strand cDNA was primed with a Not I - oligo(dT) primer [5'
                                                                  /tissue_type="mammary gland"
/dev_stage="4 weeks"
/lab_host="DH10B"
                                                                                                                                                     /organism="Mus musculus"
/strain="C57BL/6J"
/db_xref="taxon:10090"
/clone="IMAGE:1365119"
                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                         /sex="male"
                                                                                                                                       'clone_lib="Soares mouse mammary
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CAGGAGCTGTGTCGCCAGCGCATCGTGGCCGCCGTGGGTCGCGAGAACCTGGCGCGCATC 745
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia
Eukheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.

1 (bases 1 to 517)
1 (bases 1 to 517)
Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubu
Geisel,S., Kucaba,T., Lacy,M., Le,M., Martin,J., Morris,M.,
Schellenberg,K., Steptoe,M., Tan,F., Underwood,K., Moore,B.,
Theising,B., Wylie,T., Lennon,G., Soares,B., Wilson,R. and
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WashU-HHMI Mouse EST Project
Washington University School of MedicineP
4444 Forest Park Parkway, Box 8501, St. Loui
Tel: 314 286 1800
Fax: 314 286 1810
Email: mouseestewatson.wustl.edu
This clone is available royalty-free through
IMAGE Consortium (info@image.lln1.gov) for 1
                                                                                                                                                                                                                                                                                                                                                                          TCTCTGGCTTCATTTTTCTGCTGTGCAGAATATCCTATTTTATATTTTTACAGCCAGTTT
                                                                                        CCTACCTCCATGTTTACATATTCCCAGTATCTTTGCACAAACCAGGGGTCGGGGAGGG
                                                                                                        CCTACCTCTCCATGTTTACATATTCCCAGTATCTTTGCACAAACCAGGGGTCGGGGAGGG
                                                                                                                                                                             CCCTCCGGGTCCCCCCTGGTTGTAGCAGCTTGTGTCTGGGGCCCAGGACCTGAATTCCACT 1059
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                  TCTCTGGCTTCATTTTTCTGCTGTGCAGAATATCCTATTTATATTTTTACAGCCAGTTT
                                                                                                                                                            -CCTCCGGGTCCCCCTGGTTGTAGCAGCTTGTGTCTCGGGGCCAGGACCTGAATTCCACT 159
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h quality sequence stop: 475.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3']; double-stranded CDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not and Eco RI sites of the modified pT73 vector. RNA provided by Dr. Bertrand Jordan. Library constructed and normalized by Bento Soares and M.Fatima Bonaldo."

130 c 142 g 89 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note="Organ: lymph node; Vector: pT7T3D-Pac (Pharmacia) with a modified polylinker; Site_1: Not I; Site_2: Eco R: 1st strand cDNA was primed with a Not I - oligo(dT) prime [5'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /tissue_type="lymph node"
/dev_stage="4 weeks"
/lab_host="DH10B"
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/strain="C57BL/6J"
/db_xref="taxon:10090"
/clone="IMAGE:752192"
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v) for further
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TITLE JOURNAL COMMENT

Unpublished (1996) On Sep 12, 1996 this sequence The WashU-HHMI Mouse EST Project

version

replaced

REFERENCE AUTHORS

SOURCE

nouse mouse

ORGANISM

KEYWORDS VERSION ACCESSION DEFINITION

vb48e05.rl Soares mouse lymph node NbMLN RMACE:752192 5', mRNA sequence. AA288982 AA288982.1 GI:1936171

EST 14-*t* Mus musculus

RESULT 4 AA288982/c

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1166

TTTACAGCCAGTTTAGGTAATAAACTTTATTATTATGAAAGTTTTTTT 1210

TTTACAGCCAGTTTAGGTAATAAACTTTATTATGAAAGTTTTTTT

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986 298 926 358 866 418 908 478 746 538

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161

137 c

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Query Match Best Local S Matches 521

521;

Similarity 99.2 21; Conservative

41.18;

Score 508.2; DB Pred. No. 1e-84; 0; Mismatches

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AUTHORS
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VERSION
KEYWORDS
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AA940025/c
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512
             701 CAGCGCATCGTGGCCGCCGTGGGTCGCGAGAACCTGGCGCGCATCCCTCTTAACCCGGTA 760
                                                                  Local Similarity
CAGCGCATCGTGGCCGCCGTGGGTCGCGAGAACCTGGCGCGCATCCCTCTTAACCCGGTA 453
                                                        512;
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Eukaryota; Metazoa;
Eutheria; Rodentia;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: mouseest@watson.wustl.edu
This clone is available royalty-free through LLNL;
IMAGE Consortium (info@image.llnl.gov) for further:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  On Jan 19, 1998 this sequence version replaced Contact: Marra M/Mouse EST Project WashU-HMM Mouse EST Project Washington University School of MedicineP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Waterston, R.
The WashU-HHMI Mouse EST Project Unpublished (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 (bases 1 to 512)
Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuque,T.
Geisel,S., Kucaba,T., Lacy,M., Le,M., Martin,J., Morris,M.,
Schellenberg,K., Steptoe,M., Tan,F., Underwood,K., Moore,B.,
Theising,B., Wylle,T., Lennon,G., Soares,B., Wilson,R. and
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EST.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                         ible reversed clone: similarity on wrong
primer: -28m13 rev2 ET from Amersham
quality sequence stop: 432.
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                                                                                                                                    /organism="Mus musculus"
/strain="C57BL/6J"
/db_xref="taxon:10090"
/clone="IMAGE:1345089"
                                                                                                                                                                                                                                                                                               /tissue_type="Thymus"
/dev_stage="4 weeks"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                        /sex="male"
                                                                                                                                                                                                                                                                                                                                                       /clone_lib="Soares 2NbMT"
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                                                                  40.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Chordata; Craniata; Vertebrata;
Sciurognathi; Muridae; Murinae;
                                                     Score 501; DB 40;
Pred. No. 2.2e-83;
); Mismatches 0;
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                                                                              Length 512;
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                                                                                                                                                                                                                                                                                                        Unpublished (1996)
On Jan 19, 1998 this sequence version repl
Contact: Marra M/Mouse EST Project
WashU-HHMI Mouse EST Project
Washington University School of MedicineP
4444 Forest Park Parkway, Box 8501, St. LC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 (bases 1 to 512)
Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuque,T., Geisel,S., Kucaba,T., Lacy,M., Le,M., Martin,J., Morris,M., Schellenberg,K., Steptoe,M., Tan,F., Underwood,K., Moore,B., Theising,B., Wylle,T., Lennon,G., Soares,B., Wilson,R. and
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                                                                                                           Possible reversed clone: similarity on w. Seq primer: -28ml3 rev2 ET from Amersham High quality sequence stop: 488.
                                                                                                                                                                                                 Email: mouseest@watson.wustl.edu
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  The WashU-HHMI Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus musculus
                                                                                                                                                                                                                                                                       Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Waterston, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                house mouse.
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/organism="Mus musculus"
/strain="C57BL/6J"
/db_xref="taxon:10090"
                                                                                      Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                        replaced
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                                                                                                                                                          strand
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                                                                                                                                                                                                  CCTACCTCTCCATGTTTACATATTCCCAGTATCTTTGCACAAACCAGGGGTCGGGGAGGG
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                                                                                                                                                                                                                                                                                                                                                                                                                                      CTTCTGGCTGGAGACCTCATCCCACCTCTCAGGGGTGGGG-GTGCTCCCCTCCTGGTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCTCTGGCTTCATTTTTCTGCTGTGCAGAATATCCTATTTTATATTTTTACAGCCAGTTT
                                                                                                                                                                                                                                                                                 TCTCTGGCTTCATTTTTCTGCTGCAGAATATCCTATTTTATATTTTTACAGCCAGTTT 1179
                                                                                                                                                                                                                                                                                                                                          CCTACCTCCCATGTTTACATATTCCCAGTATCTTTGCACAAACCAGGGGTCGGGGAGGG
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                                                                                                                                                                                                                                                                                                                                                                                                                         CTTCTGGCTGGAGACCTCATCCCACCTCTCAGGGGTGGGGTGAGGTCTCCTCCTGGTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGTGGGAGCCCTCNCCGCCTGGGTCGGAGGGAGTGGTTGTGGAGGGTGAGATGCCTCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CATTAAGTGGGGGCGCCTTATTATTTCTTATTATTATTATTATTATTTTCTGGAACCA 333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      503;
                                                          AI029171
AI029171.1
EST.
Rattus norvegicus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia;
Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                 AI029171 548 bp mRNA EST UI-R-C0-iv-e-09-0-UI.S1 UI-R-C0 Rattus norvegicus UI-R-C0-iv-e-09-0-UI 3', mRNA sequence.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /tissue_type="Thymus"
/dev_stage="4 weeks"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /clone="IMAGE:1265184"
/clone_lib="Soares 2NbMT"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /sex-"male"
                                                                          GI:4296711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  38.5%;
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AUTHORS
TITLE
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Best Local Similarity
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                                                                                                                               CGGCCGCTGCAGGAGCTGTGTCGCCAGCGCATCGTGGCCGCCGTGGGTCGCGAGAACCTG 736
CGGCCGCTGCAGGAGCTGTCGCCAGCGCATCGTGGCCGCCGTGGGTCGCGAGAACCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            I.M.A.G.E. Consortium at LLNL (info@image.llnl.gov). IMAGE ID=1782655 The following repetitive elements were found in CDNA sequence: 163-196, >AT_rich#Low_complexity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: msoares@blue.weeg.uiowa.edu
Oligo-dT track not found, Not I site shown in beginning of sequence
is likely internal to the message. cDNA Library Preparation: M.
Fatima Bonaldo, Ph.D. Clone distribution: clones will be available
through Research Genetics This clone is also available through the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: Soares, MB
Program for Rat Gene Discovery and Mapping
University of Iowa
451 Eckstein Medical Research Building Iowa City, IA 52242,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Genome Res. 6 (9), 791-806 (1996) 97044477
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Bonaldo, M.F., Lennon, G. and Soares, M.B.
Normalization and subtraction: two approaches to facilitate gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Seq primer: M13 Forward POLYA=No.
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Fax: 319 335 9565
                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                             99
                                                                                                                                                                                                                                                                                                                                                                                                              /note="Wector: pT773D-Pac (pharmacia) with a modified polylinker; Site_1: Not I; Site_2: Eco RI; The UI-R-C0 library is a subtracted library derived from the UI-R-A1 library of individually tagged normalized libraries constructed from rat placenta, adult lung, brain, liver, kidney, heart, spleen, ovary, and muscle. The UI-R-E1 library consisted of a mixture of individually tagged normalized libraries constructed from 8, 12 and 18-day embryo. The tag is a string of 3-5 nucleotides present between the Not I site and the oligo-dT track which allows identification of the library of origin of a clone within the mixture. The subtracted library (our-R-C0) was constructed as follows: PCR amplified CDNA inserts from a pool of UI-R-A1 and UI-R-E1 clones from which 3' ESTs had been derived was used as a driver in a hybridization with the pooled UI-R-A1 and UI-R-E1 library in the form of single-stranded circles (subtracted library) was purified by hydroxyapatite column chromatography, converted to double-stranded circles and electroporated into DH10B bacteria (Life Technologies) to generate the UI-R-C0 library. This procedure has been previously described (Bonaldo, Lennon and Soares, Genome Research 6: 791-806,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /strain="Sprague-Dawley"
/db_xref="taxon:10116"
/clone="UI-R-CO-iv-e-09-0-UI"
/clone_1ib="UI-R-CO"
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/strain="sprague=Dawley"
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ORGANISM
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                                                                                                                                                                                                        On May 18, 1995 this sequence version replaced Contact: Marra M/Mouse EST project WashU-HHMI Mouse EST Project Washington University School of MedicineP 4444 Forest Park Parkway, Box 8501, St. Louis, 24, 24, 26, 1905
                                                                                                                                                                                                                                                                                                                   Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuque, Geisel,S., Kucaba,T., Lacy,M., Le,M., Martin,J., Morris,M., Schellenberg,K., Steptoe,M., Tan,F., Underwood,K., Moore,B., Theising,B., Wylie,T., Lennon,G., Soares,B., Wilson,R. and Waterston,R.
                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; 1 (bases 1 to 555)
                                                                                                                               Email: mouseest@watson.wustl.edu
This clone is available royalty-free through LLNL;
IMAGE Consortium (info@image.llnl.gov) for further f
                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus musculus
                                                                      Possible reversed clone: similarity Seq primer: -28ml3 rev2 ET from Ames High quality sequence stop: 419.
                                                                                                                                                                                Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                       Unpublished (1996)
                                                                                                                                                                                                                                                                                                   The WashU-HHMI Mouse EST Project
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/organism="Mus musculus"
/strain="C57BL/6J"
/db_xref="taxon:10090"
                                                             Locat:
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KEYWORDS SOURCE ORGANISM

EST

Rattus sp.
Rattus sp.
Eukaryota; l
Eutheria; R

Rodentia; Sciurognathi; Muridae; Murinae;

Mammalia; Rattus. ACCESSION VERSION

ROVAE05 3' AA850220 AA850220.1

GI:4131808

RESULT AA850220

DEFINITION

AA850220 523 bp EST192987 Normalized ROVAE05 3' end, mRNA

mRNA sequence.

Bento

Soares Rattus sp.

08-JAN-1999

cDNA clone

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BASE COUNT
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                                                           GAACTGCTTCTTCGCGCTCAGCGTGAAGATGGCTTCGGGCCCCACGAGCATCCGCGTGCA 549
                                                                                                                                                                                                                                          CTTTCATGCCGGGCGCTTTCACTTGGACGGCAGC
                      CTTCCAGGCCGGCCGCTTCCACTTGGACGGCAGC 583
                                                                                                                                             GACCAGCGCGCTCCTGGACGCCTGCGGCTTCTATTGGGGGACCCCTGAGCGTGCACGGGGC
                                                                                                                                                         GACCAGCGCGCTCCTGGACGCCTGCGGCTTCTATTGGGGACCCCTGAGCGTGCACGGGGC
                                                                                                                                                                                                         CCCTGGCGACACTCACTTCCGCACCTTCCGCTCCCACTCCGATTACCGGCGCATCACGCG
                                                                                                                                                                                                                                                     TTCGTCCTCGCCAGCGCCCCGTGCGTCCCCGGCCCTGCCCGGCGGTCCCCAGCCCCAGC
                                                                                                                                                                                                                                                                                          CAATGCGATCTCCCCGGCAGCAGCCCCGACGGCGGTCAGAGCCCTCCTCGTCCTCGTC 249
                                                                                                                                                                                                                                                                                                                                                                                       CCCCGGAGCCCCAGCCGCGCCTCCCCGCGTCCTGCCGCCAGCGCACCCCGGACGCTATG
                                              GAACTGCTTCTTCGCGCTCAGCCTGAAGATGGCTTTGGGGGCCCAGGAGCATCCGCGTGCA
                                                                                              GCACGAGCGGCTGCGTGCCGAGCCCGTGGGCACCTTCTTGGTGCGCGACAGTCGCCAACG
                                                                                                                     GCACGAGCGGCTGCCGAGCCCGTGGGCACCTTCTTGGTGCGCGACAGTCGTCAACG
                                                                                                                                                                                           CCCTGGCGACACTCCGCACCTTCCGCTCCCACTCCGATTACCGGCGCATCACGCG
                                                                                                                                                                                                                                                                                                                                         GCCCACCCCTCCAGCTGGCCCCTCGAGTAGGATGGTAGCACGCAACCAGGTGGCAGCCGA 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /tissue_type="Thymus"
/dev_stage="4 weeks"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone="IMAGE:642191"
/clone_11b="Soares 2N'
/sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                              36.8%;
92.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 454.8; DB 30; Pred. No. 7.8e-75; O; Mismatches 37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2NbMT
 555
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RESULT 10
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                                                                                                                                                                                        GGACCTGAATTCCACTCCTACCTCCCATGTTTACATATTCCCCAGTATCTTTGCACAAAC 1103
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                                                                                                                                   CAGGGGTCGGGGAGGGTCTCTGGCTTCATTTTTCTGCTGTGCAGAATATCCTATTTTATA 1163
                                                                                                                                                                                                                                                                               GCAGGCGCTGTGTCGCCAGCGCATCGTGGCCGCCGTGGGTCGCGAGAACCTGGCACGCAT 60
                                                                   CAAGGGTGGGGGAGGGTCTCTGGCTTCATTTTTCTGCTGTGCAGAATATTCTAGTTTATA 473
                                                                                                                                                                                                                                                                                              GGGTGAGATGCCTCCCACTTCTGGCTGGAGACCTCATCCCACCTCTCAGGGGTGGGGGTG 983
                                                                                                                                                                                                                                                                                                                                    TGCCGCCGTGCCCGCAGCATTAAGTGGGAGCGCCTTATTATTATTATTATTATTATTATTA
                                                                                                                                                                            GGACCTGAACTCCACGCCTACCTCCCATGTTTACATGTTCCCCAGTATCTTTGCACAAAC
                                                                                                                                                                                                                              CTCCCCTCCTGGTGCTCCCGGT-CCCCCTGGTTGTAGCAGCTTGTGTGTGGGGCCA 353
                                                                                                                                                                                                                                                                                                                                                                                                                 AA024269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The Institute for Genomic Research 9712, Medical Center Drive, Rockville, MD 20850, USA Tel: (301)-838-3529
Fax: (301)-838-0208
Email: nhlee@tlgr.org
Seq primer: M13-21.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished (1998)
On Jul 19, 1995 this sequence version replaced gi:2937760.
Other_ESTs: EST192988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 (bases 1 to 523)
Lee, N.H., Glodek, A., Chandra, I., Mason, T.M., Quackenbush, J.,
Kerlavage, A. R. and Adams, M.D.
Rat Genome Project: Generation of a Rat EST (REST) Catalog &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Contact: Lee, NH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone_lib="Normalized rat ovary, Bento Soares"
/note="Organ: ovary; Vector: pT/T3Pac; Site_1:
Site_2: NotI"
147 c 132 g 156 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Rattus sp."
/db_xref="ATCC (inhost):2008691"
/db_xref="taxon:10118"
/clone="ROVAE05"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           36.4%;
94.5%;
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Pred. No. 7.8e-74;
0; Mismatches 21
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  EST
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Best Local
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282
                                                               342
                                                                                                                              402
                                                                                                                                                            819
                                                                                                                                                                                              462
                                                                                                                                                                                                                          759 TACTCCGTGACTACCTGAGTTCCTTCCCCTTCCAGATCTGACCGGCTGCCGCTGTGCCGC 818
                                                                                                                                                                                                                                                                         Local Similarity
CACTTCTGGCTGGAGACCTCATCCCACCTCTCAGGGGTGGGGGTGCTCCCCCTCCTGGTGC
                                                                                                                                                                                            CACTTCTGGCTGGAGACCTCATCCCACCTCTCAGGGGTGGGGGGTGCTCCCCTCCTGGTGC
                                                               CACGTGGGAGCCCTCCCCCCCTGGGTCGGAGGGAGTGGTTGTGGAGGGTGAGATGCCTCC
                                                                                CACGTGGGAGCCCTCCCCCGCCTGGGTCGGAGGGAGGTGGTTGTGGAGGGTGAGATGCCTCC
                                                                                                                           449;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mh99h07.rl Soares mouse placenta 4NbMPl3.5 14.5 Mus musculus cDNA
clone IMAGE:459133 5', mRNA sequence.
AA024269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WashU-HHMI Mouse EST Project
WashIngton University School of MedicineP
4444 Forest Park Parkway, Box 8501, St. Lc
Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuque,T., Geisel,S., Kucaba,T., Lacy,M., Le,M., Martin,J., Morris,M., Schellenberg,K., Steptoe,M., Tan,F., Underwood,K., Moore,B., Theising,B., Wylie,T., Lennon,G., Soares,B., Wilson,R. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Seq primer: +28M13 rev2 from Amersham High quality sequence stop: 442.

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Email: mouseest@watson.wustl.edu
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mus musculus
Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Marra M/Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unpublished (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The WashU-HHMI Mouse EST Project
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                                                                                                                                                                                                                                                                                                                                                       149
                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                    /note="Organ: placenta; Vector: pT7T3D-Pac (Pharmacia) with a modified polylinker; Site_1: Not I; Site_2: Eco 1st strand cDNA was primed with a Not I - oligo(dT) pri [5'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone_lib="Soares mouse
/sex="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Mus musculus"
/strain="C57BL/6J"
/db_xref="taxon:10090"
/clone="IMAGE:459133"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /dev_stage="adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /tissue_type="placenta"
                                                                                                                                                                                                                                                                         35.8%;
97.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Chordata; Craniata; Vertebrata; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                          0; Mismatches
                                                                                                                                                                                                                                                                         Score 441.8; DB Pred. No. 2e-72;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               placenta 4NbMP13.5 14.5"
                                                                                                                                                                                                                                                           13;
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KEYWORDS
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AI400249/c
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TAGGTAATAAACTTTATTATGAAAGTTTTTTTTTAAAAGAAA 1220
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTCTCTGGCTTCATTTTTCTGCTGTGCAGAATATCCTATTTTATATTTTTTACAGCCAGTT 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTCTCTGGCTTCATTTTTCTGCTGTGCAGAATATCCTATTTTATATTTTTACAGCCAGTT 1178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A1400249 591 bp mRNA EST 30-MAR-1999 tq68d01.x1 Soares.NhHMPu_S1 Homo sapiens cDNA clone IMAGE:2113921 3' similar to TR:015097 015097 JAB, PARTIAL CDS ;contains MER22.b2 MSR1 repetitive element ;, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This clone is available royalty-free through LINL; IMAGE Consortium (info@image.llnl.gov) for further Insert Length: 816 Std Error: 0.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unpublished (1997)
On Mar 20, 1998 this sequence version
Contact: Robert Strausberg, Ph.D.
Tel: (301) 496-1550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AI400249.1 GI:4243336
EST.
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National Cancer Institute, Cancer Genome Anat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                     Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           primer: -40UP from Gibco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    quality sequence stop: 465.
Location/Qualifiers
                                                                                                                87
                                                                                                         /note="Organ: mixed (see below); Vector: pT7T3D-Pac (Pharmacia) with a modified polylinker; Site_1: Not I; Site_2: Eco RI; Equal amounts of plasmid DNA from three normalized libraries (melanocyte 2NbHM, pregnant uterus NbHPU, and fetal heart NbHH19W) were mixed, and scircles were made in vitro. Following HAP purification, this DNA was used as tracer in a subtractive hybridization reaction. The driver was PCR-amplified cDNAs from pools of 5,000 clones made from the same 3 libraries. The pools consisted of I.M.A.G.E. clones 260232-265223, 340488-345479, and 484488-489479.**

87 a 185 c 241 g 74 t 4 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gene Index
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Robert_Strausberg@nih.gov
                                                                                                                                                                                                                                                                                                                                                        /clone_lib="Soares_NhHMPu_S1"
/tissue_type="Pooled human me.
pregnant uterus"
                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                      /lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                              /clone="IMAGE:2113921"
                   34.1%;
 0;
                   Score 421.4; DB 46; Pred. No. 1.2e-68;
 Mismatches
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RESULT 12
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                                                                                                                                                                                                                                                                                                                                                                                                mp66e04.rl Soares amRNA sequence.
AA119130
MGI:348854
Seq primer
                    rax: 314 200 200
Email: mouseest@watson.wustl.edu
This clone is available royalty-free through LLNL; contact the
This _______/info@image.llnl.gov) for further information.
                                                                                                   on Sep 12, 1996 this sequence version repl
Contact: Marra M/Mouse EST project
WashU-HHMI Mouse EST Project
washington University School of Medicinep
4444 Forest Park Parkway, Box 8501, St. Lo
                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.

1 (bases 1 to 449)

Marra, M., Hillier, L., Allen, M., Bowles, M., Dietrich, N., Dubuque, T., Geisel, S., Kucaba, T., Lacy, M., Te, M., Martin, J., Moore, B., Schellenberg, K., Steptoe, M., Tan, F., Underwood, K., Moore, B., Theising, B., Wylie, T., Lennon, G., Soares, B., Wilson, R. and
                                                                           Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                   The WashU-HHMI Mouse EST Project Unpublished (1996)
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Mus musculus cDNA clone IMAGE:574206
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Best Local Similarity
Matches 445; Conserv
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                       AW047382 422 bp mRNA EST UI-M-BH1-ame-e-06-0-UI.sl NIH_BMAP_M_S2 Mus UI-M-BH1-ame-e-06-0-UI 3', mRNA sequence. AW047382.1 GI:5907911 EST.
            house mouse.
  musculus
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Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /db_xref="taxon:10090"
/clone="IMAGE:574206"
/clone_lib="Soares 2NbMT"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /sex="male"
/tissue_type="Thymus"
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/strain="C57BL/6J"
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98.9%;
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Pred. No. 1.3e-68;
0; Mismatches 3
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TITLE
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                                                                                            381
                                                                                                                    362
                                            441
                                                                                                                                           321
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TCGCGCTCAGCGTGAAGATGGCTTCGGGCCCCACGAGCATCCGCGTGCACTTCCAGGCCG
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TGCGTGCCGAGCCCGTGGGCACCTTCTTGGTGCGCGACAGTCGTCAACGGAACTGCTTCT
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                                                                                                                                                                                                                                                                 CTCACTTCCGCACCTTCCGCTCCCACTCCGATTACCGGCGCATCACGCGGGACCAGCGCGC 380
TGCGTGCCGAGCCCGTGGGCACCTTCTTGGTGCGCGACAGTCGCCAACGGAACTGCTTCT
                                                                                                                TCCTGGACGCCTGCGGCTTCTATTGGGGACCCCTGAGCGTGCACGGGGCGCACGAGCGGC
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Fax: 301 443 9890

Email: mESTRemail.nih.gov

Oligo-dT track not found, Not I site shown in beginning of sequence oligo-dT track not found, Not I site shown in beginning of sequence is likely internal to the message. cDNA Library Preparation: M.B. Soares Lab Clone distribution: NIH BMAP cDNA clones will be made available by the means that is soon to be determined. When NIH determines the means for distribution of the BMAP cDNA clones, this record will be updated accordingly when that means is determined. Seq primer: M13 Forward
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                on Jun 5, 1998 this sequence version re
Contact: Chin, H
National Institute of Mental Health
6001 Executive Blvd. Room 7N-7190, MSC
20892-9643, USA
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Bonaldo, M.F., Lennon, G. and Soares, M.B.
Normalization and subtraction: two approaches to facilitate gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
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/note="Vector: pT73D-Pac (Pharmacia) with a modified
polylinker; Site_1: Not I; Site_2: Eco RI; The
polylinker; Site_1: Not I; Site_2: Eco RI; The
NIH_BMAP_M_S2 library is a subtracted library derived from
NIH_BMAP_M_S1, which in turn is a subtracted library
derived from a mixture of normalized libraries from ten
regions of the mouse brain (cerebellum, brain stems,
olfactory bulbs, hypothalamus, cortex, amygdala, basal
ganglia, pineal gland, striatum, hipoccampus). The driver
used for subtraction consisted of a pool of 5,000 clones
from the NIH_BMAP_M_S1 library and a pool of 2,000 clones
obtained from non-normalized and normalized mouse brain
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TAG_LIB-NIH_BMAP_M_S2
TAG_TISSUE-corpus-striatum
TAG_SEQ-ACGGC"
TAG_SEQ-ACGGC 50 t
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/db_xref="taxon:10090"
/clone="UI-W-BHI-ame-e-06-0-UI"
/clone=lib="NHH_BMAP_M_S2"
/dev_stage="27-32 days"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Email: mouseest@watson.wustl.edu
This clone is available royalty-free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WashU-HHMI Mouse EST Project
WashIngton University School of MedicineP
4444 Forest Park Parkway, Box 8501, St. Louis, MO
Tel: 314 286 1800
Fax: 314 286 1810
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Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuc Geisel,S., Kucaba,T., Lacy,M., Le,M., Martin,J., Morris,M., Schellenberg,K., Steptoe,M., Tan,F., Underwood,K., Moore,B., Theising,B., Wylle,T., Lennon,G., Soares,B., Wilson,R. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unpublished (1996)
Contact: Marra M/Mouse EST Project
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The WashU-HHMI Mouse EST Project
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                                                                                 65
                                                                             T 3']; double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified pT7T3 vector. Library went through one round of normalization, and was constructed by Bento Soares and M.Fatima Bonaldo."

204 c 144 g 80 t
                                                                                                                                                                                                                                   /note="Organ: placenta; Vector: pT7T3D-Pac (Pharmacia)
with a modified polylinker; Site_1: Not I; Site_2: Eco RI;
lst strand cDNA was primed with a Not I - oligo(dT) primer
[5'
                                                                                                                                                                                                           /tissue_type="placenta"
/dev_stage="adult"
                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Mus musculus"
/strain="C57BL/6J"
/db_xref="taxon:10090"
/clone="IMAGE:445748"
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34.0%;
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419.8;
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                                                                                          Tel: 314 286 1800
Fax: 314 286 1810
Email: mouseest@watson.wustl.edu
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                      Unpublished (1996)
On Sep 12, 1996 this sequence version replect contact: Marra M/Mouse EST Project
WashU-HHMI Mouse EST Project
Washington University School of Medicinep
4444 Forest Park Parkway, Box 8501, St. Ld
                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.

1 (bases 1 to 436)

Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuque,T., Geisel,S., Kucaba,T., Lacy,M., Le,M., Martin,J., Morris,M., Schellenberg,K., Steptoe,M., Tan,F., Underwood,K., Moore,B., Theising,B., Wylie,T., Lennon,G., Soares,B., Wilson,R. and Waterston,R.

Waterston,R.

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                  Possible reversed clone: similarity on Seq primer: -28M13 rev2 from Amersham High quality sequence stop: 372.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        house mouse.
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ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 33.3%; Score 410.8; DB 28; Length 436; Best Local Similarity 99.1%; Pred. No. 1.1e-66; Matches 434; Conservative 0; Mismatches 2; Indels 2; Gaps
                                                                                                                                                                                                      308 GCCCCTGGCGACACTCACTTCCGCACCTTCCGCTCCCACTCCGATTACCGGCGCATCACG 367
                                                                                                                                                                                                                                                                                                      121 TGGCCCACCCCTCCAGCTGGCCCCTCGAGTAGGATGGTAGCACGCAACCAGGTGGCAGCC 180
                                                                                                  428 GCGCACGAGCGGCTGCGT 445
                                                                                                                                 359
                                                                                                                                             368 CGGACCAGCGCCTCCTGGACGCCTGCGGCTTCTATTGGGGACCCCTGAGCGTGCACGGG 427
                                                                                                                                                                                         299
                                                                                                                                                                                                                                                                128 TGGCCCACCCCTCCAGCTGGCCCCTCGAGTAGGATGGTAGCACGCAACCAGGTGGCAGCC 187
                                                                                                                                                                                                                                                 241 TCTTCGTCCTCGCCAGCGG-CCCCGTGCGTCCCCGGCCCTG-CCGGCGGTCCCAGCCCCA 298
                                                                                                                                                                                                                                                                                                                                                                                                                       GCCCCTGGCGACACTCACTTCCGCACCTTCCGCTCCCACTCCGATTACCGGCGCATCACG 358
                                                                       GCGCACGAGCGGCTGCGT 436
                                                                                                                                 CGGACCAGCGCGCTCCTGGACGCCTGCGGCTTCTATTGGGGGACCCCTGAGCGTGCACGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /tissue_type="Thymus"
/dev_stage="4 weeks"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Mus musculus"
/strain="C57BL/6J"
/db_xref="taxon:10090"
/clone="IMAGE:577342"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    clone_lib="Soares 2NbMT"
               4, 2000, 16:33:12
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